Table 2. Details on Some *Agrostis* and *Polypogon* in USA and Canada, and Their Hybrids (12/12/2005) (see section 1.7, Table 1 and Figure 1 of "White Paper: Perspective on Creeping Bentgrass, *Agrostis stolonifera* L." – USDA/APHIS/BRS, B. MacBryde)

| Agrostis Species (some synonyms), [subg. Agrostis incl. section, or subg. Zingrostis]; also Bigeneric Hybrids | USA; and Nativity (Native Range) | Species, Bigeneric Hybrids: Ploidy and Genomic Details (main cytotype bolded) | Natural Hybrids: Parents of Crosses | Natural or Spontaneous Hybrids: Country of Occurrence Reported ("spontaneous" hybrids have naturalized parents) | Experimental Hybrids: Cross in Greenhouse, or by Spontaneous Pollen Flow in Field Test (analysis Karyological, Transgenic, or Other) | Hybrids: Ploidy and Genome, Information About Sexual Reproduction; Comments (not indicating direction of cross, <i>i.e.</i> which species was female parent, which male) |
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| 30 A. stolonifera (A. alba of some authors, but not Linnaeus; A. alba var. palustris, A. stolonifera var. palustris; A. stolonifera var. compacta; A. stolonifera var. maritima) [Sect. Vilfa]; Creeping Bentgrass | Naturalized only, or perhaps native at some northern salt marshes and lakesides (but not native in New England). Native Iceland, Eurasia and North Africa. | $2n = 4x = 28$, $A_2A_2A_3A_3$ (strict allotetraploid – Jones 1956b, 1956c; Warnke <i>et al.</i> 1998); also, at least in Europe (Harvey 2004), $2n = 5x = 35$, $A_2A_2A_3A_3A_3$ or $A_2A_2A_2A_3A_3$ and $2n = 6x = 42$, $A_2A_2A_2A_3A_3A_3$ Also aneuploidy (frequent), B-chromosomes, aneusomaty (Björkman 1954, Kik <i>et al.</i> 1993, Frey 1997). | 30 × 5 (A. ×castriferrei); 30 × 6 (A. ×murbeckii); 30 × 7; 30 × 12 (apparently); 30 × 13; 30 × 21; 30 × 32; 30 × 34; 30 × Pf (intergeneric); 30 × Pm (intergeneric); 30 × Pv (intergeneric). | See under the other parental species. Some hybrids are sterile but vegetatively vigorous by stolons or rhizomes (or both). | 30 × 5 (T + O); 30 × 6 (T + K); 30 × 7 (T); 30 × 13 (T + K); 30 × 20 (T); 30 × 23 failed (T); 30 × 25 (T); 30 × 29 (T); 30 × A. sp. (T); 30 × 32 (T + O); 30 × 34 (K); 30 × Pf (T + O); 30 × Pw (T + O). | See <i>Agrostis stolonifera</i> hybrids under the other parental species (listed alphabetically). Reproduction of <i>Agrostis stolonifera</i> often mainly vegetative, by stolons (<i>e.g.</i> Kik <i>et al.</i> 1990b, 1992). Sexual reproduction predominately outcrossing (Davies 1953; Belanger <i>et al.</i> 2003b), with some cultivars perhaps obligately so (Warnke <i>et al.</i> 1998; <i>cf.</i> Belanger <i>et al.</i> 2003b). Also highly selffertile clone, and selfing has been utilized (Warnke <i>et al.</i> 1998; Tomić <i>et al.</i> 1999). 2n = 2x = 14 reported by Tomić <i>et al.</i> 2003; further taxonomic study seems warranted. |
| 4 A. blasdalei Blasdale's or Cliff Bentgrass | Native California (endemic). | 2 <i>n</i> = 6 <i>x</i> = 42 (Harvey 2004). | 4 × 10 | 4 x 10: USA: west-central CA (Harvey 2004). | | |
| 5 A. canina (A. canina var. fascicularis; A. pallida With., but not DC.) [Sect. Agrostis]; Velvet Bentgrass | Naturalized. Native Europe into E Asia. | $2n = 2x = 14$, A_1A_1 Also aneuploidy, possibly polyploidy $(4x, 5x, 6x, 8x)$; and B-chromosomes (Romero García & Blanca 1988, Frey 1997). | 30 × 5 (<i>A.</i> *castriferrei); 5 × 6 & 5 × 13 (both unconfirmed, or error – Widén 1971). | 30 x 5: Fennoscandia, rare (Widén 1971). | 30 × 5: Greenhouse (Belanger et al. 2003b; had failed: Davies 1953, Björkman 1954); and transgenic field tests; 5 × 21 (Björkman 1954); 5 × 34 (Davies 1953, Björkman 1954). | 30 x 5 (would be 2n = 21, and hybrid name's type unknown, per Widén 1971): Confirmation needed per Bradshaw 1975a; now transgenic tests: field – Wipff & Fricker 2001, Christoffer 2003, greenhouse – Belanger et al. 2003b. 5 x 21: Certainly sterile (Widén 1971). 5 x 34 (2n = 21): Quite sterile (Widén 1971). |

| 6 A. capillaris (A. tenuis; A. vulgaris) [Sect. Vilfa]; Colonial Bentgrass (Rhode Island Bentgrass, Browntop) | Naturalized. Native Eurosiberia. | 2n = 4x = 28, A ₁ A ₁ A ₂ A ₂ (segmental allotetraploid, partly from a 2x A. canina-like ancestor – Jones 1956b, 1956c, cf. Romero García et al. 1988b). Occasional aneuploidy, B-chromosomes (Frey 1997). | 30 × 6 (<i>A.</i> *murbeckii); 5 × 6 (unconfirmed, or error – Widén 1971); 6 × 7 (<i>A.</i> *fouilladeana); 6 × 8; 6 × 13 (<i>A.</i> *bjoerkmanii); 6 × 14 (probable); 6 × 34 (<i>A.</i> *sanionis). | 30 x 6: e.g. Fennoscandia (Widén 1971); Germany (Weber 1920); Netherlands (Grootjans et al. 1987); UK (Bradshaw 1958, 1975a, cf. Smith 1972, Sell & Murrell 1996); Belgium (Meerts & Lefèbvre 1989); France (Fouillade 1933); Spain (Romero García et al. 1988b); Portugal? (Hollman et al. 2005); Canada (Malte 1928, Hinds 1986); USA: NW?, UT?? (Carlbom 1967, Welsh et al. 1993); New Zealand (Edgar & Forde 1991, Edgar & Connor 2000). 6 x 7: UK (Sell & Murrell 1996); Belgium (Lambinon et al. 2004); France (Fouillade 1933); Spain (Romero García et al. 1988b); Australia (Batson 1998a); New Zealand (Edgar & Forde 1991, Edgar & Connor 2000). 6 x 8: Fennoscandia (Widén 1971). 6 x 13: UK (Bradshaw 1959a, Sell & Murrell 1996); USA: NE likely (Stuckey & Banfield 1946, per Björkman 1954, Widén 1971, Bradshaw 1975a, Edgar & Forde 1991), UT? (Welsh et al. 1993). 6 x 14: NW USA? (Pendergrass 2001). 6 x 34: UK, Europe, Russia (Widén 1971, Bradshaw 1975a, Sell & Murrell 1996). | 30 × 6; 6 × 7 (Edgar & Forde 1991, Rumball & Forde 1977 per Batson 1998a); 6 × 13; 6 × 34 (Davies 1953, but probably most were not hybrids per Widén 1971). | 30 x 6 (2n = 28, A₁A₂A₂A₃): Parents readily crossing, with F₁ vegetatively vigorous and widespread, but with high sterility (Bradshaw 1975a, Sell & Murrell 1996); almost wholly abortive pollen, exceptionally a few seeds observed (Widén 1971); semi-fertile in New Zealand, with pollen fertility 41% (Edgar & Forde 1991); suspected U.S. hybrids in OR (Carlbom 1967, p. 39), possibly UT (Welsh et al. 1993 treat A.s. sensu lato, but Harvey 2004 does not and considers A.s. very rare in UT). Transgenic tests: field − Wipff & Fricker 2001, field and greenhouse − Belanger et al. 2003a, 2003b. 6 x 7 (some 2n = 35): Partially fertile (Sell & Murrell 1996). Backcrossing into #6 in New Zealand (Edgar & Forde 1991, Edgar & Connor 2000). 6 x 13 (2n = 35, A₁A₁A₂A₂A₃): Crossing rather readily, including backcrosses and F₂. F₁ vegetatively vigorous, but "infertile" (pollen fertility 45%, seeds 50%). F₂ and backcrosses aneuploid, low vigor (Bradshaw 1975a). Highly sterile (Sell & Murrell 1996). Probable in UT (Welsh et al. 1993 treat A.s. sensu lato, but A.s. sensu stricto is very rare in UT per Harvey 2004). 6 x 14: Probable in OR (K.L. Pendergrass [U.S. FWS], via M. Jordan [TNC] 2001 letter to J.L. White [APHIS]). 6 x 34 (2n = 28): Unclear facility of crossing in nature and experimentally (readily crossing per Harvey 2004); most experimental "hybrids" (Davies 1953, Jones 1956b) likely instead selfs of #34 or #6 (Widén 1971, Bradshaw 1975a). Probably natural hybrids sterile (Widén 1971, Sell & Murrell 1996). |
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| 7 A. castellana [Sect. Vilfa]; Dryland Bentgrass (including Highland Bentgrass) | Introduced. Native Western Mediterranean. | $2n = 4x = 28$, $A_1A_1A_2A_2$ and $2n = 6x = 42$, $A_1A_1A_1A_2A_2A_2$ In Portugal also aneuploidy, B-chromosomes (Frey 1997). | 30 × 7; 6 × 7 (A. ×fouilladeana). | Both: France (Fouillade 1933); 6 x 7: UK (Sell & Murrell 1996); Belgium (Lambinon et al. 2004); Spain (Romero García et al. 1988b); Australia (Batson 1998a); New Zealand (Edgar & Forde 1991, Edgar & Connor 2000). | 30 × 7 (varied results in transgenic field tests); 6 × 7 (Edgar & Forde 1991, Rumball & Forde 1977 per Batson 1998a). | 30 x 7: Pollen very irregular (Romero García et al. 1988b). Transgenic tests: greenhouse and field – Belanger et al. 2003a, 2003b, field – Wipff & Fricker 2001, but not Christoffer 2003. 6 x 7 (some 2n = 35): Partially fertile (Sell & Murrell 1996). Backcrossing into #6 in New Zealand (Edgar & Forde 1991, Edgar & Connor 2000). |

| 8 <i>A. clavata</i> ; Clubbed Bentgrass | Native Alaska and Yukon | 2n = 6x = 42 | 6 × 8 | 6 x 8: Fennoscandia (Widén 1971). | | |
|--|---|---|---|--|---|--|
| 10 <i>A. densiflora</i> ; Dense-flowered Bentgrass | Native California to Oregon. | 2n = 6x = 42 (Harvey 1993). | 4 × 10; 10 × 12 (perhaps). | 4 x 10: USA: west-central CA (Harvey 2004) | 10×12 (perhaps, as F_1 seeds not grown out). | 10 x 12: Good seed set in experimental cross, but the seeds not grown out to confirm, and #10 can self-pollinate (Carlbom 1967, p. 88). |
| 12 <i>A. exarata</i> ; Spike Redtop, Spike Bentgrass | Native Far E Siberia and W North America: Alaska– Mexico. | 2n = 4x = 28, 6x = 42 , and 8x = 56 (Harvey 2004, Frey 1997, Taylor & Mulligan 1968). | 30 × 12 (apparently); (30? or) 13 × 12; 10 × 12 (perhaps); 12 × 29 | 30 x 12: NW USA? (Carlbom 1967). (30? or) 13 x 12: USA: UT? (Welsh et al. 1993). 12 x 29: USA: UT? (Welsh et al. 1993). | 10 × 12 (perhaps, as F ₁ seeds not grown out). | 30 x 12: Suspected in WA and OR, sterile (Carlbom 1967, pp. 109-110, 112). (30? or) 13 x 12: Apparently; Welsh et al. 1993 treat A. stolonifera sensu lato (as #13 + #30), but Harvey does not and considers A.s. very rare in UT. 10 x 12: Good seed set in experimental cross, but the seeds not grown out to confirm, and #10 can self-pollinate (Carlbom 1967, p. 88). 12 x 29: Apparently; Welsh et al. 1993. |
| 13 A. gigantea (A. stolonifera var. major; A. stolonifera var. gigantea, A. alba var. gigantea; just A. stolonifera or "A. alba" for some authors; A. nigra) [Sect. Vilfa]; Redtop (Black Bentgrass) | Naturalized. Native Eurasia (especially Central Asia). | 2n = 6x = 42, A ₁ A ₁ A ₂ A ₂ A ₃ A ₃ (Jones 1956c; ancestry perhaps by fusion of A ₁ A ₂ A ₃ gametes of an <i>A. ×murbeckii</i> – Widén 1971). Also B-chromosomes (Frey 1997). | 30 × 13; 5 × 13 (unconfirmed, or error – Widén 1971); 6 × 13 (A. *bjoerkmanii); 6 × 13 (or 30?) (A.s. s.l.); 12 × 13 (or 30?) (A.s. s.l.); 13 × 21; 13 (or 30?) (A.s. s.l.) × 29 | 30 x 13, 6 x 13 & 13 x 21: Fennoscandia (Widén 1971). 30 x 13: Sweden (Blom 1961 per Widén 1971); UK (Davies 1953, Bradshaw 1975a, Sell & Murrell 1996). 6 x 13: UK (Bradshaw 1959a, Sell & Murrell 1996); USA: NE likely (Stuckey & Banfield 1946, per Björkman 1954, Widén 1971, Bradshaw 1975a, Edgar & Forde 1991), UT? (Welsh et al. 1993). 12 x 13 (or 30?): USA: UT? (Welsh et al. 1993). | 30 × 13; 6 × 13 | 30 x 13 (2n = 35, A ₁ A ₂ A ₂ A ₃ A ₃): Experimental F ₁ cross easy; vegetatively vigorous, but only 25% pollen and seed fertilities (Bradshaw 1975a), or highly or usually sterile (Sell & Murrell 1996, Dore & McNeill 1980, Widén 1971); transgenic tests: field – Wipff & Fricker 2001, Watrud et al. 2004, greenhouse – Belanger et al. 2003b. 6 x 13 (2n = 35, A ₁ A ₁ A ₂ A ₂ A ₃): Crossing rather readily, including backcrosses and F ₂ . F ₁ vigorous vegetatively, but "infertile" (pollen fertility 45%, seeds 50%). F ₂ and backcrosses aneuploid, low vigor (Bradshaw 1975a). Highly sterile (Sell & Murrell 1996). Probable in UT (Welsh et al. 1993 treat A.s. sensu lato, but A.s. sensu stricto is very rare in UT per Harvey 2004). 12 x 13 (or 30?): Apparently; Welsh et al. 1993 treat A. stolonifera sensu lato (as #13 + #30), but Harvey 2004 does not and considers A.s. very rare in UT. 13 x 21 (2n = 49): Probably not easily formed in nature; rare, no pollen or seeds (Widén 1971). (30? or) 13 x 29: Apparently; Welsh et al. 1993 treat A. stolonifera sensu lato (as #13 + #30), but Harvey 2004 does not and considers A.s. very rare in UT. |

| 14 <i>A. hallii</i> ; Hall's Bentgrass | Native California and Oregon, and also Washington? | 2 <i>n</i> = 6 <i>x</i> = 42 (Harvey 1993). | 6 × 14 (probable); 14 × 25 (apparently). | 6 x 14: NW USA? (Pendergrass 2001). 14 x 25: NW USA? (Carlborn 1967). | | 6 x 14: Probable in OR (K.L. Pendergrass [U.S. FWS], <i>via</i> M. Jordan [TNC] 2001 letter to J.L. White [APHIS]). 14 x 25: Probable (and fertile) in OR (Carlbom 1967, pp. 98, 126). |
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| 20 <i>A. idahoensis</i> ; Idaho Bentgrass, Idaho Redtop | Native Western North America — Alaska to California and New Mexico. | 2n = 4x = 28 (Harvey 2004). | | | 30 × 20 (transgenic test – Christoffer 2003). | 30 × 20: Transgenic test: field – Christoffer 2003. (Perhaps " <i>A. idahoensis</i> " is not a sp. but varied hybrids, from #12 crossing with #29 and/or each crossing with #33, <i>per</i> Welsh <i>et al.</i> 1993, but <i>cf.</i> Harvey 1993, 2001, 2004.) |
| 21 A. mertensii (A. borealis) [Sect. Agrostis]; Northern or Arctic Bentgrass | Native, somewhat circumpolar, S in mountains. | 2n = 2x = 14, $3x = 21$, $6x = 42$ (but $6x$ is A . $scabra$ per Harvey 2004), $7x = 49$, and $8x = 56$; also aneuploidy (Frey 1997). | 30 × 21; 13 × 21; 21 × 34 | All three: Fennoscandia (Widén 1971). | 5 × 21 (Björkman 1954); 21 × 34 (Björkman 1954). | 30 x 21 (2n = 42) (Björkman 1954, Widén 1971). 5 x 21: Certainly sterile (Widén 1971). 13 x 21 (2n = 49): Probably not easily formed in nature; rare, no pollen or seeds (Widén 1971). 21 x 34 (2n = 42) (Widén 1971). |
| 23 <i>A. nebulosa</i> [Subg. <i>Zingrostis</i>]; Cloudgrass | Cultivated; occasional escape, in Ohio established (Harvey 2004). Native Iberian Peninsula. | 2n = 2x = 14 (Tinney 1936, Romero García & Blanca 1988, Frey 1997). | | | 30 × 23 (no transgenic flow found in field test – Christoffer 2003). | No transgenic flow found (Christoffer 2003). |
| 25 A. pallens (A. diegoensis); Leafy or Dune Bentgrass | Native Western North America: W BC – Calif., & NV, ID, MT. | 2n = 6x = 42 , 8x = 56 (Harvey 1993, 2004, Frey 1997). | 14 × 25 | NW USA? (Carlbom 1967). | 30 × 25 (transgenic test – Wipff & Fricker 2001, Christoffer 2003). | 30 x 25: Transgenic test: field – Wipff & Fricker 2001, Christoffer 2003. 14 x 25: Probable (and fertile) in OR (Carlbom 1967, pp. 98, 126). |
| 29 A. scabra (A. hyemalis or "A. hiemalis" var. scabra); Rough Bentgrass, Ticklegrass | Native Greenland, North America to Mexico and NE Asia. | 2n = 6x = 42 (Frey 1997). | (30? or) 13 (<i>A.s. s.l.</i>) × 29; 12 × 29; 29 × 32 (<i>A. ×amurensis</i>). | (30? or) 13 × 29 & 12 × 29: USA: UT? (Welsh <i>et al.</i> 1993). 29 × 32: Far E Russia (Probatova & Kharkevich 1983). | 30 × 29 (transgenic test – Christoffer 2003). | 30 x 29: Transgenic test: field – Christoffer 2003. (30? or) 13 x 29: Apparently; Welsh et al. 1993 treat A. stolonifera sensu lato (as #13 + #30), but Harvey 2004 does not and considers A.s. very rare in UT. |
| A. sp. | Unknown: from eastern Oregon | | 30 × A. sp. | | 30 × A. sp. (transgenic test – Wipff & Fricker 2001). | Species unidentified (Wipff & Fricker 2001); native or introduced and perhaps naturalized. |
| 32 <i>A. trinii</i> (A. vinealis subsp. trinii, A. coarctata subsp. trinii; A. flaccida subsp. trinii); Trinius' Bentgrass | Native E Asia to W Alaska. | 2n = 2x = 14, 4x = 28 (Frey 1997). Also B-chromosomes (Frey 1997). | 30 × 32 (<i>A.</i> ×ussuriensis); 29 × 32 (<i>A.</i> ×amurensis). | 30 x 32: Far E Russia (Probatova 1984). 29 x 32: Far E Russia (Probatova & Kharkevich 1983). | 30 × 32 (transgenic test – Christoffer 2003). | 30 x 32: Transgenic test: field – Christoffer 2003. Note: <i>A. trinii</i> taxonomy unsettled; a synonym of <i>A. vinealis</i> in Kartesz 2004, but variously accepted by Koyama 1987 for Japan and several authors for Russia (<i>e.g.</i> Tzvelev 1983 [1976], Kurchenko & Ianova 1976, Kurchenko 1979c, Malyschev & Peschkova 1990, and Probatova 1984 <i>etc.</i>). |

| 34 A. vinealis (A. stricta; A. canina subsp. montana; A. canina var. arida; A. coarctata) [Sect. Agrostis]; Brown Bentgrass | Introduced primarily. Native Alaska, Eurasia, Greenland. | 2n = 4x = 28, $A_1A_1A_2A_2$ or $A_1A_1A_1A_1$ (somewhat as autotetraploid with $2x$ A . canina-like ancestry, or perhaps from cross of $4x$ A . canina [if such] and A . capillaris – Jones 1956b, cf. Romero García et al. 1988b, but the "A. canina" ploidy over $2x$ may not be A . canina – Romero García & Blanca 1988; cf. Vergara & Bughrara 2003). | 30 × 34; 6 × 34 (A. ×sanionis); 21 × 34 | All three: Fennoscandia, with 30 × 34 rare (Widén 1971); both 30 × 34 & 6 × 34: UK (Hubbard 1984, Sell & Murrell 1996). | 30 × 34; 5 × 34 (Davies 1953, Björkman 1954); 6 × 34 (Davies 1953, but probably most were not hybrids <i>per</i> Widén 1971); 21 × 34 (Björkman 1954). | 30 x 34 (2n = 28): Readily crossing per Harvey 2004; experimental hybrids completely sterile (Bradshaw 1975a); a few viable seeds (Davies 1953). Björkman 1954 also made a cross of 5x #30 and #34. 5 x 34 (2n = 21): Quite sterile (Widén 1971). 6 x 34 (2n = 28): Unclear facility of crossing in nature and experimentally (readily crossing per Harvey 2004); most experimental "hybrids" (Davies 1953, Jones 1956b) likely instead selfs of #34 or #6 (Widén 1971, Bradshaw 1975a). Probably natural hybrids sterile (Widén 1971, Sell & Murrell 1996). 21 x 34 (2n = 42) (Widén 1971). |
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| | Table 2 Subpart. × Agropogon Intergeneric (Agrostis × Polypogon) Hybrids, and Polypogon Hybrids | | | | | | | |
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| Bigeneric Hybrids | Hybrid Range | Hybrid Ploidy | Polypogon Species | Hybrids' Reported Occurrence | Experimental Hybrids | Hybrids' Sexual Reproduction; Comments | | |
| 1AP *Agropogon , (no unique name) Agrostis stolonifera * Polypogon fugax | Spontaneous if in W USA, but likely not (cf. Herbst & Clayton 1998, Barkworth 2004, also Wipff & Fricker 2001). | | nor in CA or OR for many of Intergeneric hybrid (Björkm | 1916 (Herbst & Clayton 1998), | | 30 x Pf: Transgenic field test – Christoffer 2003. | | |
| 2AP *Agropogon <i>lutosus</i> (*A. littoralis) Agrostis stolonifera * Polypogon monspeliensis | Spontaneous AL, LA, NM, CA, WA, many states?; Canada (BC). Native Western Eurasia? | 2n = 4x = 28 (Tutin 1980, Sell & Murrell 1996). | Polypogon monspeliensis Sp.: 2n = 14, 28, 35 & 42 (Barkworth 2004, Giraldo- Cañas 2004, Harvey 1993); native S Europe to Turkey. | UK, France (Sell & Murrell 1996, Hubbard 1984); Canada (BC), W & SE USA (Kartesz 2004); Chile (Rúgolo de Agrasar & Molina 1997b); New Zealand (Esler 1988; Edgar & Connor 2000); Australia (Weiller et al. 1995-[2003]); China (Qian & Sun 1998). | 30 × Pm (transgenic test – Christoffer 2003). | 30 x Pm: Almost complete pollen and seed sterilities. Vigor varies, perhaps because of hybridization with different ecotypes of #30, which is more vigorous (Bradshaw 1975b; cf. Welsh et al. 1993). Transgenic field test — Christoffer 2003. Pm x Pv (P. xadscendens): Occurs naturally in Europe (Barkworth 2004). | | |
| 3AP *Agropogon robinsonii Agrostis stolonifera * Polypogon viridis | Spontaneous several states?. Native Western Eurasia? | 2n = 4x = 28 | Polypogon viridis (Agrostis viridis; A. semiverticillata, P. semiverticillatus) Sp.: 2n = 14, 28 & 42 (Barkworth 2004, Giraldo-Cañas 2004, Harvey 1993); native Eurasia. | UK, rare (Hubbard 1984, Sell & Murrell 1996); USA: UT? (Welsh <i>et al.</i> 1993). | 30 × Pv (transgenic test – Christoffer 2003). | 30 x Pv: Experimental crossing facility uncertain. Parents highly self-incompatible; hybrid has complete pollen sterility (Bradshaw 1975b, Hubbard 1984). Short-lived perennial (Sell & Murrell 1996). Potentially several states; UT? per Welsh et al. 1993 who treat A. stolonifera sensu lato (as #30 + #13), but Harvey 2004 considers A.s. very rare in UT. Transgenic field test – Christoffer 2003. Pm x Pv (P. xadscendens): Occurs naturally in Europe (Barkworth 2004). | | |